

WHAT IS CLAIMED IS:

5 1. A method for determining and maintaining dialog
focus in a conversational speech system comprising the steps
of:

5 presenting a command associated with an
application to a dialog manager, the application associated
with the command being unknown to the dialog manager;

the dialog manager determining a current context
of the command by reviewing a multi-modal history of events;

10 determining at least one method responsive to the
command based on the current context; and

executing the at least one method responsive to
the command associated with the application.

15 2. The method as recited in claim 1, wherein the step
of presenting a command includes the step of employing at
least one multi-modal device for presenting the command.

20 3. The method as recited in claim 2, wherein the at
least one multi-modal device for presenting the command

includes one of a telephone, a computer, and a personal digital assistant.

4. The method as recited in claim 1, wherein the step of determining a current context of the command by reviewing a multi-modal history of events includes the step of providing a linked list of all events in the multi-modal history.

5. The method as recited in claim 4, wherein the events in the multi-modal history includes at least one of events linked by time, by type, by transaction, by class and by dialog focus.

6. The method as recited in claim 1, wherein the step of determining at least one method includes the step of referencing all active applications using a component control to determine the at least one method which is appropriate based on the current context of the command.

7. The method as recited in claim 1, wherein the command is presented in a formal language such that a plurality of human utterances represent an action to be taken.

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8. The method as recited in claim 1, wherein the step of determining a current context of the command by reviewing a multi-modal history of events includes the step of maintaining a current dialog focus and a list of expected responses in the dialog manager to provide a reference for determining the current context.

9. The method as recited in claim 1, further comprising the step of querying a user for one of information needed to resolve the current context and information needed to take an appropriate action.

10. A program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps for determining and

5 maintaining dialog focus in a conversational speech system,
the method steps comprising:

presenting a command associated with an
application to a dialog manager, the application associated
with the command being unknown to the dialog manager;

the dialog manager determining a current context
of the command by reviewing a multi-modal history of events;

determining at least one method responsive to the
command based on the current context; and

executing the at least one method responsive to
the command associated with the application.

11. The program storage device as recited in claim 10,
wherein the step of presenting a command includes the step
of employing at least one multi-modal device for presenting
the command.

12. The program storage device as recited in claim 11,
wherein the at least one multi-modal device for presenting
the command includes one of a telephone, a computer, and a
personal digital assistant.

13. The program storage device as recited in claim 10,
wherein the step of determining a current context of the
command by reviewing a multi-modal history of events
includes the step of providing a linked list of all events
in the multi-modal history.

14. The program storage device as recited in claim 13,
wherein the events in the multi-modal history include at
least one of events linked by time, by type, by transaction,
by class and by dialog focus.

15. The program storage device as recited in claim 10,
wherein the step of determining at least one method includes
the step referencing all active applications using a
component control to determine the at least one method which
is appropriate based on the current context of the command.

16. The program storage device as recited in claim 10,
wherein the command is presented in a formal language such
that a plurality of human utterances represent an action to
be taken.

17. The program storage device as recited in claim 10,
wherein the step of determining a current context of the
command by reviewing a multi-modal history of events
includes the step of maintaining a dialog focus and a list
of expected responses in the dialog manager to provide a
reference for determining the current context.

18. The program storage device as recited in claim 10,
further comprising the step of querying a user for one of
information needed to resolve the current context and
information needed to take an appropriate action.

19. A system for determining and maintaining dialog
focus in a conversational speech system comprising:
a dialog manager adapted to receive commands from
a user, the dialog manager maintaining a current dialog
focus and a list of expected responses for determining a
current context of the commands received;
a multi-modal history coupled to the dialog
manager for maintaining an event list of all events which
affected a state of the system, the multi-modal history

adapted to provide input to the dialog manager for
determining the current context of the commands received;
and

a control component adapted to select at least one
method responsive to the commands received such that the
system applies methods responsive to the commands for an
appropriate application.

20. The system as recited in claim 19, wherein the
appropriate application includes one of an active
application, an inactive application, an application with a
graphical component and an application with other than a
graphical component.

21. The system as recited in claim 19, wherein the
commands are input to the dialog manager by one of a
telephone, a computer, and a personal digital assistant.

22. The system as recited in claim 19, wherein the
multi-modal history includes a linked list of all events to
associate a given command to the appropriate application.

23. The system as recited in claim 22, wherein the events in the multi-modal history include at least one of events linked by time, by type, by transaction, by class and by dialog focus.

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24. The system as recited in claim 19, wherein the control component references all active applications to determine the at least one method which is appropriate based on the current context of the commands.

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25. The system as recited in claim 19, wherein the command is presented in a formal language such that a plurality of human utterances represent an action to be taken.

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